Introduction to DIY Solar Energy

Monday, June 6, 2011

7:30 pm to 8:30 pm in the Buchanan Auditorium, Mansfield Library, 54 Warrenville Road, Mansfield Center

The recent surge in the price of gasoline highlights the uncertainties of our present fossil fuel based economy and power grid. Photovoltaic solar panels convert the energy in sunlight into electricity that can be used as a portable power source for appliances, as a backup to the electric grid in case of a power outage, and which can be connected to the electric grid to effectively run your meter backwards thereby reducing your electric bill.

This presentation will provide some basic information about how photovoltaic panels work, how to obtain them, and how to utilize them to increase your resilience in the face of an uncertain energy future. This presentation will explain the different direct current voltages output by solar panels, and how to convert the raw panel DC output to usable AC for grid tie to run devices that require 120 VAC, and to charge batteries for use when the sun is not shining. Certain devices, such as DC motors, electronics, and LED lighting may be suitable for direct connection to the panel.

*Presenter Martin Fox is a retired electrical engineering professor from the University of Connecticut. For the last 10 years his primary research interest has been power engineering with a particular emphasis on solar energy.